POSITIVE TRAIN CONTROL OVERVIEW

The Rail Safety Improvement Act (RSIA), signed by the President on October 16, 2008 as Public Law 110-432, enacted a federal mandate requiring installation of Positive Train Control (PTC) technology on most Class 1 freight and passenger rail systems, including commuter rail systems, by December 31, 2015.

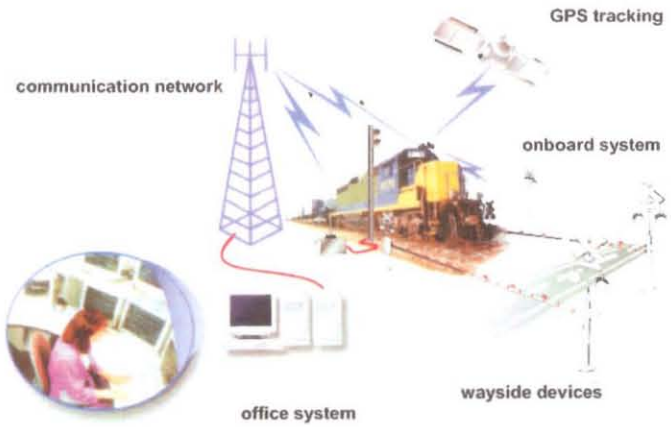
To ensure the Denton County Transportation Authority (DCTA) can successfully implement PTC **and** continue to provide vital public transportation services, we need Congress to:

- **Extend the implementation deadline now for commuter railroads three to five years;**
- **Increase funding for PTC implementation by commuter railroads to cover 80% of their PTC implementation costs,**
- **Direct the Federal Communications Commission to provide radio spectrum, without costs, for commuter railroad PTC implementation.**

These actions would allow the Federal Railroad Administration (FRA) to review the successful early implementation of PTC by the Southern California Regional Rail Authority in order to identify the most effective and cost efficient implementation strategies. It would also give Congress the opportunity to review both the FRA's 2012 mid-term Report to Congress on the status of PTC implementation and the Federal Transit Administration's report on PTC due in 2013.

What is Positive Train Control?

PTC is a system of predictive enforcement technology that is intended to prevent train-to-train collisions, over-speed derailments, misaligned special trackwork and casualties or injuries to roadway workers operating within their limits of authority as a result of unauthorized incursion by a train.



PTC systems vary widely in complexity and sophistication based on the level of automation, functionality, system architecture, and the wayside system upon which they are based.

Currently, all affected railroads including DCTA are aggressively pursuing PTC implementation in accordance with FRA approved Positive Train Control Implementation Plans (PTCIP).

What is DCTA doing to implement PTC?

Since June 2011, DCTA has been operating its A-train passenger rail system, a 21.3 mile commuter rail service between Denton and Dallas counties in north central Texas, in mixed use with the Dallas Garland & Northeastern (DGNO) railroad.

Committed to timely PTC implementation, DCTA has taken significant steps to advance its efforts, including preparation and submittal of the PTCIP, approved by the FRA in December 2010, and the incorporation of PTC provisions within DCTA's eleven (11) new Diesel Multiple Unit (DMU) passenger rail vehicles to allow efficient integration of PTC equipment. In July 2011, DCTA awarded a General Engineering Consultant (GEC) services contract to prepare the 30% conceptual design and technical specifications, Request for Proposal development, and oversight of the PTC Design-Build Integration contract scheduled for award in mid-2012.

However, even with these advancements, DCTA faces several major challenges in implementing the program within the required timeframe.

What are the major challenges DCTA faces related to PTC implementation?

Funding: According to the American Public Transportation Association (APTA), PTC implementation will cost commuter rail systems nationally over $2 billion. Currently, DCTA's project is projected to cost at least $17 million, a significant investment for an agency of our size. Previously, Congress appropriated $50 million to help fund the implementation nationwide. However, funding for PTC was not included in the FY2012 appropriations bill. In a good faith effort to have our system online by 2015, DCTA has already committed initial capital funding toward the full integration of PTC. The anticipated cost of PTC implementation was not available at the time the initial funding decisions were made. **DCTA has already delayed the expansion of transit service in order to accommodate the funding demands of PTC**. (Mid-day train service - $500K per year; additional bus, 16 hours per day - $250k per year)

The A-train connects with Dallas Area Rapid Transit in Carrollton and provides customers with connection opportunities to key destinations in both Denton and Dallas counties.

Equipment: Certain pieces of technology required for PTC, such as the crucial data radio, is still under development and only one industry supplier has been identified as an approved manufacturer. In addition, other on-board vehicle equipment can be provided by a single supplier to ensure interoperability. It is anticipated that these issues will create bottlenecks in the manufacturing and delivery of approved equipment for integration by December 2015. Additionally, the industry has continued to further develop new technologies which have yet to be tested and/or approved. Thus, PTC equipment manufacturing and installation backlogs could impede or prevent DCTA's timely implementation in accordance with the law.

Interoperability Protocols: A core element to DCTA's system is the use of communication protocols to ensure interoperability. In October 2008, the four (4) major freight railroads signed an agreement to work together to develop an interoperability standard for PTC. The development of the detailed technical specifications for this standard is the responsibility of the Interoperable Train Control (ITC) committee formed by the Class I freight railroads. Once completed, these specifications will ultimately be adopted by, and published by, the American Association of Railroads (AAR). To date, the ITC specifications have not been published in final form. The lack of availability of these critical specifications may impact DCTA's ability to implement PTC.

Radio Spectrum: PTC systems require the use of interoperable radio communications among the vehicles, wayside systems and the back office dispatch servers. Unfortunately, radio spectrum that is allowed to be used for PTC is a finite and highly expensive commodity. Currently, passenger railroads have two practical options to acquire the spectrum necessary for PTC implementation and each has practical and financial implications that could lead to delays in PTC software development and implementation:

1. Lease Currently Owned Spectrum – PTC-220, LLC is an entity formed by the Class I railroads to own and manage spectrum to be used for the implementation of PTC. The rail industry is uncertain if that spectrum is sufficient to accommodate both freight and passenger operations in congested areas, and the costs to use the necessary frequencies is volatile.
2. Acquisition – Some experts have indicated that the acquisition of adequate radio spectrum, especially in dense, metropolitan areas, could pose significant challenges and delays to the commuter rail industry.

Congressional action would enable DCTA and other commuter rail systems to effectively and efficiently develop and implement a PTC system as intended by Rail Safety Improvement Act.